

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES F. HOOVER

Appeal No. 1996-4135
Application No. 08/346,325¹

ON BRIEF

Before JOHN D. SMITH, OWENS, and KRATZ, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed November 29, 1994. According to appellant, this application is a continuation of Application No. 08/108,946, filed August 18, 1993, now abandoned; which is a continuation of Application No. 07/724,022, filed July 1, 1991, now abandoned.

This is a decision on appeal from the examiner's refusal to allow claims 1-3, 5, and 8-14, which are all of the claims pending in this application.

BACKGROUND

The appellant's invention relates to polysiloxane-polycarbonate block copolymers and compositions containing such polymers. An understanding of the invention can be derived from a reading of exemplary claim 1. The claims on appeal have been correctly reproduced in an appendix to the brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Bialous et al. (Bialous)	4,391,935	Jul. 05, 1983
Davis et al. (Davis)	5,025,074	Jun. 18, 1991
	(filed Aug. 27, 1990)	
European Patent	0 376 502	Jul. 04, 1990
(Okamoto)		

Claims 1-3, 5, 10, 11 and 14 stand rejected under 35 U.S.C.

§ 103 as being unpatentable over Okamoto or, in the alternative, Okamoto in view of Davis. Claims 8, 9, 12 and 13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Okamoto in view of Bialous or, in the alternative, Okamoto in view of Davis and Bialous.

OPINION

We have carefully considered the respective positions advanced by the appellant and the examiner. For the reasons set forth below, we will not sustain any of the examiner's stated rejections.

Okamoto discloses the preparation of polycarbonate-polyorganosiloxane copolymers in which the polysiloxane may include a dimethylsiloxane monomer. Okamoto teaches use of 2-allyl phenol in the preparation of polydimethylsiloxane (PDMS) in example 1-4, the PDMS being disclosed as useful in preparing a polycarbonate-polysiloxane copolymer as in example 3-6 of Okamoto.

The examiner correctly acknowledges that Okamoto does not disclose polycarbonate-polysiloxane block copolymers having 4-allyl phenolic links between a polysiloxane and polycarbonate segments thereof as required by the appealed claims (answer, pages 3-5). According to the examiner, however, it would have been obvious to substitute 4-allyl phenol for the 2-allyl phenol used in preparing the reactive PDMS of Okamoto and to ultimately arrive at the herein claimed copolymer by the subsequent use of such a modified PDMS in preparing a

polycarbonate-polysiloxane copolymer by the method exemplified in example 3-6 of Okamoto. In this regard, the examiner, maintains, in effect, that such a substitution would have been suggested by (1) the positional isomeric relationship of 2-allyl phenol to 4-allyl phenol (answer, page 4), or (2) the alternativeness of 2-allyl phenol and 4-allyl phenol as taught by Davis in producing a polysiloxane-polycarbonate copolymer.

We cannot agree with either rationale for the proposed modification. Structural similarity may provide the requisite suggestion to modify a known compound to arrive at a new structurally similar compound where there is a reasonable expectation that a skilled artisan would make the new compound so as to obtain the same properties that are desirable in the old structurally similar compound. However, there are no *per se* rules of obviousness. Here, we cannot subscribe to the examiner's theory since the positional isomerism of one of the multiple reactants that may be utilized in the formation of the claimed polycarbonate-polysiloxane block copolymers with one of the reactants that may be used in forming the prior art copolymer clearly does not intuitively result in product

copolymers that are necessarily so structurally similar that a skilled artisan would have expected substantially similar properties so as to render the use of the positional isomeric reactant obvious. Indeed, as noted by appellant (brief, page 6), the use of the claimed 4-allyl phenol would be expected to result in a more linear copolymer structure than the bent structural configuration that would be associated with the copolymer obtained by using 2-allyl phenol.

With regard to the examiner's reliance on Davis to furnish the requisite suggestion for the examiner's proposed modification of Okamoto, we note that Davis teaches that 2-allyl phenol and 4-allyl phenol are two of several alternatives for forming a chain stopper by reaction with a hydride polydiorganosiloxane (column 1, line 38 through column 2, line 10, and column 5, lines 3-9). We do not consider the above-noted teachings of Davis sufficient to suggest that 4-allyl phenol would have been an obvious substitute for 2-allyl phenol as a reactant in the process of Okamoto so as to form 4-allyl phenolic links between the polysiloxane and polycarbonate segments of a copolymer as herein claimed. We note that the evidentiary record furnished by the examiner does not suggest

any advantage or convincing reason to use 4-allyl phenol in forming the PDMS of Okamoto so as to modify the expected bent structure of the copolymers formed with the 2-allyl phenolic links (Example 3-6). Bialous, as further relied upon by the examiner with respect to claims 8, 9, 12² and 13, does not cure the above-noted deficiency.

Here, the most that can be concluded from the collective teachings of the applied references is that it might have been obvious for one of ordinary skill in the art to try using a 4-allyl phenol as a substitute reactant in Okamoto. Of course, it is by now well settled that such is not the proper standard for determining obviousness under 35 U.S.C. § 103. See *In re O'Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). "Where the legal conclusion [of obviousness] is not supported by facts it cannot stand." *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968).

² We note that the examiner inexplicably fails to group claim 11, which depends from claim 12, with the claims that are rejected over the combined teachings of Okamoto and Bialous with or without Davis.

For the foregoing reasons, we conclude that the examiner has not met the initial burden of presenting a case of *prima facie* obviousness. Accordingly, we reverse the examiner's rejections.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-3, 5, 10, 11 and 14 under 35 U.S.C. § 103 as being unpatentable over Okamoto or, in the alternative, Okamoto in view of Davis, and claims 8, 9, 12 and 13 under 35 U.S.C. § 103 as being unpatentable

over Okamoto in view of Bialous or, in the alternative, Okamoto
in view of Davis and Bialous is reversed.

REVERSED

JOHN D. SMITH)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
TERRY J. OWENS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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